

CLAIMS

1) An inkjet recording element comprising a support and at least one ink-receiving layer comprising at least one hydrosoluble binder and at least one aluminosilicate polymer obtainable by a preparation method that
5 comprises the following steps:

a) treating a mixed aluminum and silicon alkoxide only comprising hydrolyzable functions, or a mixed aluminum and silicon precursor resulting from the hydrolysis of a mixture of aluminum compounds and silicon compounds only comprising hydrolyzable functions, with an
10 aqueous alkali, in the presence of silanol groups, the aluminum concentration being maintained at less than 0.3 mol/l, the Al/Si molar ratio being maintained between 1 and 3.6 and the alkali/Al molar ratio being maintained between 2.3 and 3;

b) stirring the mixture resulting from step a) at ambient temperature in the
15 presence of silanol groups long enough to form the aluminosilicate polymer; and

c) eliminating the byproducts formed during steps a) and b) from the reaction medium,

wherein the ink-receiving layer also comprises inorganic particles.

2) The recording element according to Claim 1, wherein the
20 inorganic particles are based on metal oxide or metal hydroxide.

3) The recording element according to Claim 2, wherein the
25 inorganic particles are based on alumina, silica, titanium, zirconium, or their mixtures.

4) The recording element according to Claim 3, wherein the
30 inorganic particles are selected from among the group consisting of the boehmites, fumed aluminas, colloidal silicas, fumed silicas, calcium silicates, magnesium silicates, zeolites, kaolin, bentonite, silicon dioxide, and titanium dioxide.

5) The recording element according to Claim 1, wherein the inorganic particles are based on calcium carbonates or barium carbonates.

5 6) The recording element according to any one of the previous claims, wherein the ink-receiving layer comprises a quantity of aluminosilicate polymer in the dry state between 5 and 20 percent by weight compared with the total dry inorganic weight.

10 7) The recording element according to any one of the previous claims, wherein, in the ink-receiving layer, the total dry inorganic weight is between 5 and 95 percent of the total dry receiving layer weight.

15 8) The recording element according to Claim 1, wherein the alkali of step a) to prepare the aluminosilicate polymer is selected from the group consisting of sodium, potassium, and lithium hydroxide.

20 9) The recording element according to Claim 1, wherein the aluminum concentration used to prepare the aluminosilicate polymer is maintained between 1.5×10^{-2} and 0.3 mol/l.

10) The recording element according to Claim 1, wherein alkali/Al molar ratio to prepare the aluminosilicate polymer is about 3.

25 11) The recording element according to Claim 1, wherein the mixed aluminum and silicon precursor resulting from hydrolysis of a mixture of aluminum compounds and silicon compounds only having hydrolyzable functions is a product resulting from the mixture in an aqueous medium (i) of a compound selected from the group consisting of aluminum salts, aluminum alkoxides and
30 aluminum halogenoalkoxides and (ii) at least one compound selected from the

group consisting of silicon alkoxides and chloroalkoxides only having hydrolyzable functions.

5 12) The recording element according to Claim 11, wherein said mixed aluminum and silicon precursor is the product resulting from the mixture (i) of an aluminum halide and (ii) a silicon alkoxide only having hydrolyzable functions.

10 13) The recording element according to Claim 12, wherein silicon alkoxide only having hydrolyzable functions is tetramethyl orthosilicate or tetraethyl orthosilicate.

 14) The recording element according to Claim 1, wherein the hydrophilic binder is gelatin or polyvinyl alcohol.